

R.F. DOUBLE TRIODE

Double triode intended for use as R.F. and A.F. amplifier and self oscillating mixer.

QUICK REFERENCE DATA (each unit)

Anode current	I_a	10	mA
Transconductance	S	6.1	mA/V
Amplification factor	μ	55	-

HEATING: Indirect by A.C. or D.C.; parallel supply

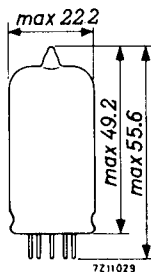
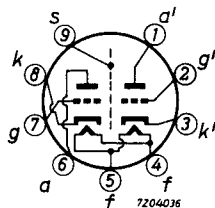
Heater voltage V_f 6.3 V

Heater current I_f 435 mA

DIMENSIONS AND CONNECTIONS

Dimensions in mm

Base: Noval



CAPACITANCES

Anode to grid	C_{ag}	1.5 pF
	$C_{a'g'}$	1.5 pF
Anode to cathode	C_{ak}	0.17 pF
	$C_{a'k'}$	0.18 pF
Anode to cathode + heater + screen	$C_{a/kfs}$	1.2 pF
	$C_{a'/k'fs}$	1.2 pF
Grid to cathode + heater + screen	$C_{g/kfs}$	3.1 pF
	$C_{g'/k'fs}$	3.1 pF
Anode to cathode + heater + screen with external screen of 22.5 mm diam.	$C_{a/kfs}$	1.8 pF
	$C_{a'/k'fs}$	1.8 pF
Anode to anode	$C_{aa'}$	max. 0.04 pF
Grid to grid	$C_{gg'}$	max. 0.003 pF
Anode to grid other unit	$C_{ag'}$	max. 0.008 pF
Grid to anode other unit	$C_{ga'}$	max. 0.008 pF
Anode to anode with external screen of 22.5 mm diam.	$C_{aa'}$	max. 0.008 pF
Anode to cathode other unit	$C_{ak'}$	max. 0.008 pF
Grid to cathode other unit	$C_{gk'}$	max. 0.003 pF
Cathode to anode other unit	$C_{ka'}$	max. 0.008 pF
Cathode to grid other unit	$C_{kg'}$	max. 0.003 pF

TYPICAL CHARACTERISTICS

Anode voltage	V_a	250 V
Grid voltage	V_g	-2.7 V
Anode current	I_a	10 mA
Transconductance	S	6.1 mA/V
Amplification factor	μ	55 -

REMARK

Microphony

This tube can be used without special precautions against microphony in A.F. applications in which the input voltage $V_i \geq 5$ mV for an output of 50 mW (or 50 mV for an output of 5 W) provided the peak acceleration of the tube is not greater than indicated in the section "Microphony" of the "General Operational Recommendations".

OPERATING CHARACTERISTICSAs R.F. amplifier

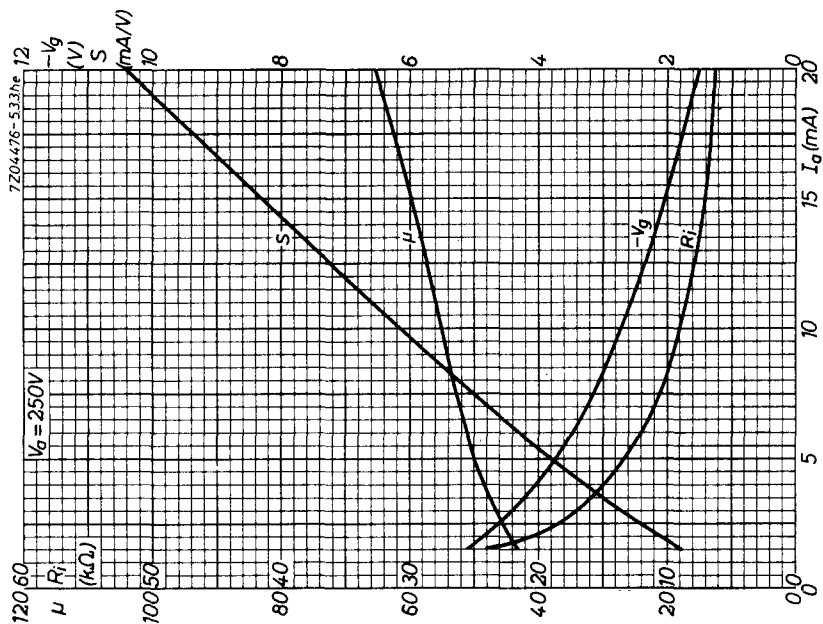
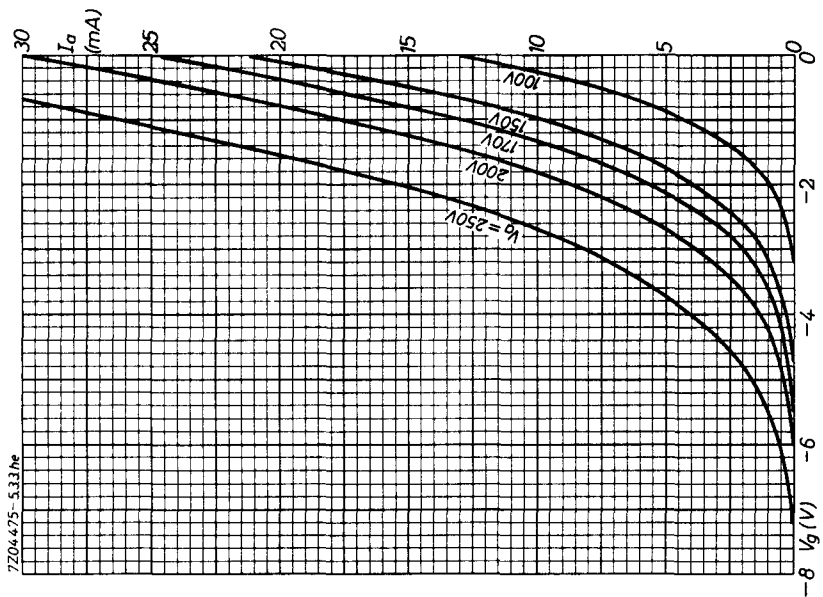
Supply voltage	V_b	250 V
Anode resistor	R_a	1.8 k Ω
Anode voltage	V_a	230 V
Cathode resistor	R_k	200 Ω
Grid voltage	V_g	-2.2 V
Anode current	I_a	10.8 mA
Transconductance	S	6.8 mA/V
Internal resistance	R_i	8.3 k Ω
Grid input resistance (f = 100 MHz)	r_g	4.7 k Ω
Equivalent noise resistance	R_{eq}	580 Ω

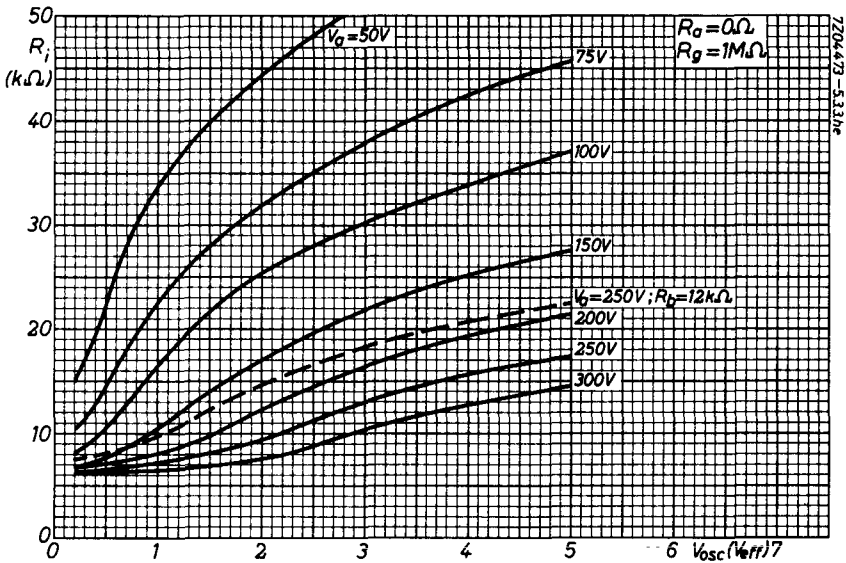
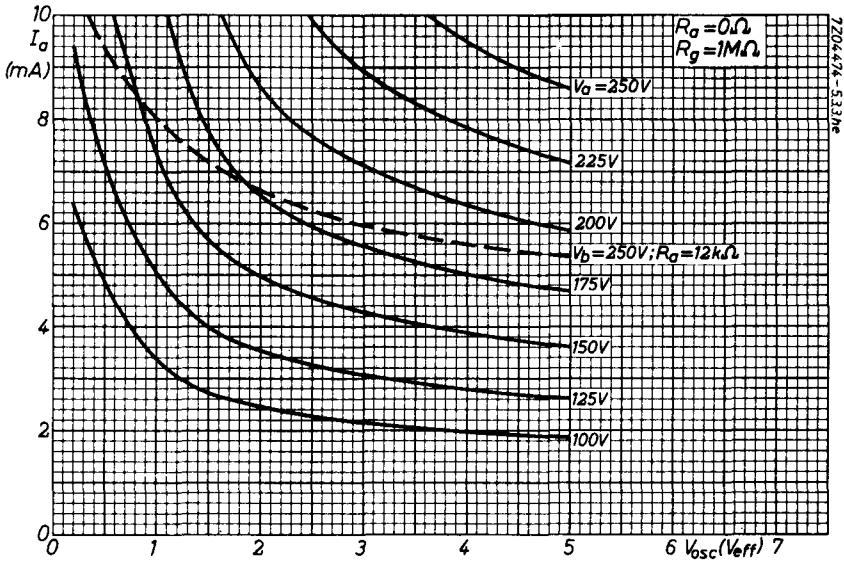
As self-oscillating mixer

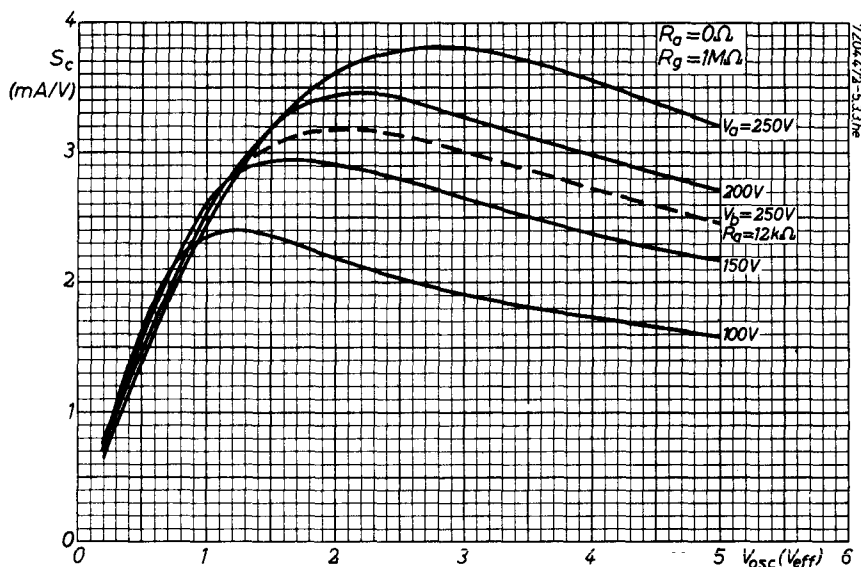
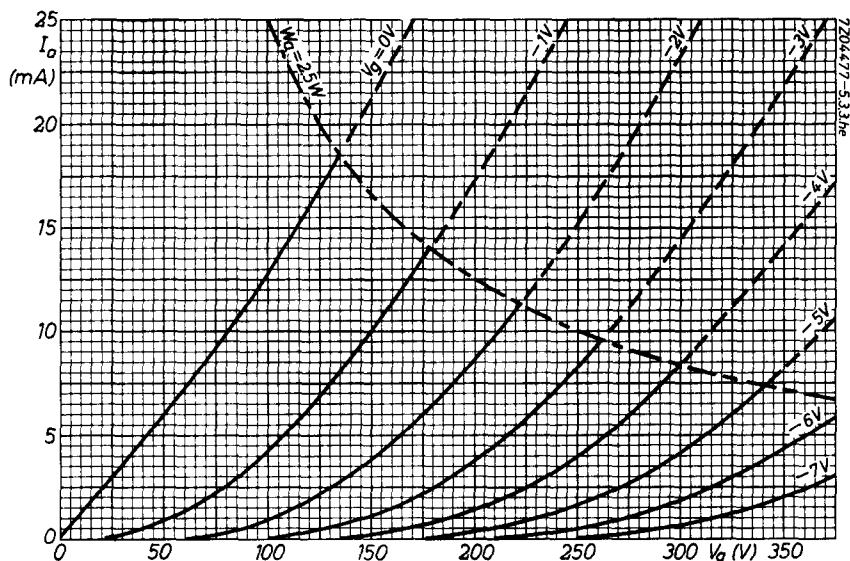
Supply voltage	V_b	250 V
Anode resistor	R_a	12 k Ω
Grid resistor	R_g	1 M Ω
Oscillator voltage	V_{osc}	3.0 V _{RMS}
Anode current	I_a	6 mA
Conversion conductance	S_c	3 mA/V
Internal resistance	R_i	18 k Ω
Grid input resistance (f = 100 MHz)	r_g	15 k Ω

LIMITING VALUES (Design centre rating system) (Each unit unless otherwise stated)

Anode voltage	V_{a0}	max. 550 V
	V_a	max. 300 V
Anode dissipation	W_a	max. 2.5 W
Anode dissipation, total for both units	$W_a + W_a'$	max. 4.5 W
Cathode current	I_k	max. 15 mA
Grid voltage	$-V_g$	max. 100 V
Grid resistor	R_g	max. 1 M Ω
Cathode to heater voltage	V_{kf}	max. 90 V







PHILIPS

Data handbook



**Electronic
components
and materials**

ECC85

page	sheet	date
1	1	1969.12
2	2	1969.01
3	3	1969.01
4	4	1969.01
5	5	1969.01
6	6	1969.01
7	FP	1999.08.14